submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

6. **Stringency of Requirements for Individual Pollutants.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA and California Ocean Plan. Individual pollutant restrictions consist of technology-based effluent limitations (TBELs) and water quality-based effluent limitations (WQBELs). The TBELs consist of restrictions on $BOD_5 20^oC$, TSS, pH, and percent removal of $BOD_5 20^oC$ and TSS, which implement the minimum applicable federal technology-based requirements for POTWs. In addition, effluent limitations more stringent than federal technology-based requirements consisting of restrictions on oil and grease, settleable solids, and turbidity are necessary to implement state treatment standards in Table 2 of the Ocean Plan. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. WQBELs for radionuclides, benzidine, PCBs, and TCDD equivalents have been scientifically derived to implement WQOs that protect beneficial uses. Both the beneficial uses and the water quality objectives are approved pursuant to federal law and are the applicable federal water quality standards. All beneficial uses and water quality objectives contained in the Basin Plan and the Ocean Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR part 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

7. **Antidegradation Policy.** Federal regulation 40 CFR section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California"). Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. The discharges permitted in this Order are consistent with the antidegradation provisions of 40 CFR § 131.12 and State Water Board Resolution 68-16 and is described in further detail in section IV.D.2. of this Fact Sheet.

8. **Anti-Backsliding Requirements**. Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. The applicability of these requirements to the order is discussed in detail in section IV.D.1. of the Fact Sheet.

   The accompanying monitoring and reporting program requires continued data collection and if monitoring data show reasonable potential for a constituent to cause or contribute to an exceedance of water quality standards, the Order will be reopened to incorporate WQBELs. Such an approach ensures that the discharge will adequately protect water quality standards for designated beneficial uses and conform to antidegradation policies and anti-backsliding provisions.

9. **Endangered Species Act (ESA) Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now

prohibited, or becomes prohibited in the future, under the California ESA (Fish and Wildlife Code, sections 2050 to 2097). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable ESA.

10. **Monitoring and Reporting**. 40 CFR § 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. CWC sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The MRP establishes monitoring and reporting requirements to implement federal and state requirements. This MRP is provided in Attachment E.

11. **Water Recycling.** State Water Board Resolution 2009-0011, Adoption of a Policy for Water Quality Control for Recycled Water (Revised January 22, 2013, effective April 25, 2013) directs the Regional Water Board to encourage recycling. Consistent with this policy, the Discharger shall submit a feasibility report evaluating the feasibility of additional recycling efforts to reduce the amount of treated effluent discharged as authorized in this Order, and a recycled water progress report describing any updates to the development of increased recycled water production and/or distribution. These reports shall be included in the annual report submittal, as described in the monitoring and reporting program (MRP).

12. **Standard and Special Provisions**. Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR § 122.41, and additional conditions applicable to POTWs in accordance with 40 CFR § 122.42, are provided in Attachment D. The Regional Water Board has also included in this Order Special Provisions applicable to the Discharger. The rationale for the Special Provisions contained in this Order is provided in this Fact Sheet.

## D. Impaired Water Bodies on the CWA section 303(d) List

The State Water Board proposed the California 2014-16 Integrated Report from a compilation of the adopted Regional Water Boards' Integrated Reports containing CWA section 303(d) List of Impaired Waters and section 305(b) Reports following recommendations from the Regional Water Boards and information solicited from the public and other interested persons.. On April 06, 2018, the 2014-2016 Integrated Report Section 303(d) List of Impaired Waters was approved by USEPA. The CWA section 303(d) list can be viewed at the following link:

https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml

The Ocean off Ormond Beach is not on the 303(d) list for pollutants/stressors from point and non-point sources. The coast and bay shoreline at Point Mugu Beach and Port Hueneme Beach Park are on the 2014-2016 for indicator bacteria. The back basins in Port Hueneme Harbor are listed for arsenic, DDT, dieldrin, PAH, and PCB and the Port Hueneme Pier is listed for PCBs. The bay and harbor at Ventura Harbor/Ventura Keys are listed for arsenic, coliform and indicator bacteria, dieldrin, and PCBs. The Ventura Marina Jetties, coastal bay and shoreline, are listed for DDT and PCB. The Regional Water Board has adopted a TMDL to monitor legacy pesticides in McGrath Lake, which can drain into the Ocean north of the outfall under high groundwater conditions.

## E. Other Plans, Polices and Regulations

1. **Secondary Treatment Regulations**. 40 CFR § 133 establishes the minimum levels of effluent quality to be achieved by secondary treatment. These limitations, established by

USEPA, are incorporated into this Order, except where more stringent limitations are required by other applicable plans, policies, or regulations or to prevent backsliding.

2. **Storm Water.** CWA section 402(p), as amended by the Water Quality Act of 1987, requires NPDES permits for storm water discharges. Pursuant to this requirement, in 1990, USEPA promulgated 40 CFR § 122.26 that established requirements for storm water discharges under an NPDES program. To facilitate compliance with federal regulations, on November 1991, the State Water Board issued a statewide general permit, General NPDES Permit No. CAS000001 and Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities. This permit was amended in September 1992 and reissued on April 17, 1997 in State Water Board Order No. 97-03-DWQ, and superseded by Order No. 2014-0057-DWQ on April 1, 2014 to regulate storm water discharges associated with industrial activity.

   The OWTP is subject to the requirements of California's General Permit for Storm Water Discharges Associated with Industrial Activities NPDES No. CAS000001, Water Quality Order No. 2014-0057-DWQ (Industrial General Permit). The Discharger submitted a Notice of Intent (WDID 4 56I027080) to comply with the requirements of the Industrial General Permit, which became effective July 1, 2015.

   The Discharger developed and currently implements a Storm Water Pollution Prevention Plan (SWPPP) to comply with the requirements of the State Water Board's Industrial General Permit.

3. **Sanitary Sewer Overflows (SSOs).** The CWA prohibits the discharge of pollutants from point sources to surface waters of the United States unless authorized under an NPDES permit. (33 USC sections 1311 and 1342). The State Water Board adopted General WDRs for Sanitary Sewer Systems, (Water Quality Order No. 2006-0003-DWQ; SSO WDR) on May 2, 2006, as amended, to provide a consistent, statewide regulatory approach to address SSOs. The SSO WDR requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes and sewer lines to apply for coverage under the SSO WDR, develop and implement sewer system management plans, and report all SSOs to the State Water Board's online SSO database. Regardless of the coverage obtained under the SSO WDR, the Discharger's collection system is part of the POTW that is subject to this NPDES permit. As such, pursuant to federal regulations, the Discharger must properly operate and maintain its collection system (40 CFR § 122.41 (e)), report any non-compliance (40 CFR § 122.41(1)(6) and (7)), and mitigate any discharge from the collection system in violation of this NPDES permit (40 CFR § 122.41(d)).

   The requirements contained in this Order sections VII.C.3.b (Spill Cleanup Contingency Plan section), VII.C.4 (Construction, Operation and Maintenance Specifications section), and VII.C.6 (Spill Reporting Requirements section) are intended to be consistent with the requirements of the SSO WDR. The Regional Water Board and USEPA recognizes that there may be some overlap between these NPDES permit provisions and SSO WDR requirements, related to the collection systems. The requirements of the SSO WDR are considered the minimum thresholds (see Finding 11 of State Water Board Order No. 2006-0003-DWQ). To encourage efficiency, the Regional Water Board and USEPA will accept the documentation prepared by the Dischargers under the SSO WDR for compliance purposes as satisfying the requirements in sections VII.C.3.b, VII.C.4, and VII.C.6, provided the more stringent provisions contained in this NPDES permit are also addressed. Pursuant to SSO WDR, section D, provision 2(iii) and (iv), the provisions of

this NPDES permit supersede the SSO WDR, for all purposes, including enforcement, to the extent the requirements may be deemed duplicative.

4. **Pretreatment.** Section 402 of the CWA and implementing regulations at 40 CFR § 403 establish pretreatment requirements for POTWs which receive pollutants from non-domestic users. This Order contains pretreatment program requirements pursuant to 40 CFR § 403 that are applicable to the Discharger.

5. **Sewage Sludge/Biosolids Requirements.** Section 405 of the CWA and implementing regulations at 40 CFR § 503 require that producers of sewage sludge/biosolids meet certain reporting, handling, and use or disposal requirements. The State has not been delegated the authority to implement this program; therefore, USEPA is the implementing agency. This Order contains sewage sludge/biosolids requirements pursuant to 40 CFR § 503 that are applicable to the Discharger.

6. **Watershed Management.** This Regional Water Board has been implementing a Watershed Management Approach (WMA) to address water quality protection in the Los Angeles Region, as detailed in the Watershed Management Initiative (WMI). The WMI is designed to integrate various surface and ground water regulatory programs while promoting cooperative, collaborative efforts within a watershed. It is also designed to focus limited resources on key issues and use sound science. Information about watersheds in the region can be obtained at the Regional Water Board's website at http://www.waterboards.ca.gov/losangeles/water_issues/programs/regional_program/watershed/index.shtml. The WMA emphasizes cooperative relationships between regulatory agencies, the regulated community, environmental groups, and other stakeholders in the watershed to achieve the greatest environmental improvements with the resources available.

   The Regional Water Board has prepared and periodically updates its Watershed Management Initiative Chapter and the latest version was updated April 2018. This document contains a summary of the region's approach to watershed management. It addresses each watershed and the associated water quality problems and issues. It describes the background and history of each watershed, current and future activities, and addresses TMDL development. The information can be accessed on the Regional Water Board's website: http://www.waterboards.ca.gov/losangeles.

   This Order and the accompanying Monitoring and Reporting Program (Attachment E) fosters implementation of this approach. The Monitoring and Reporting Program requires the discharger to participate in regional monitoring programs in the Southern California Bight.

## IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATION.

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 CFR section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, 40 CFR § 122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a); proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information may be used; or an indicator parameter may be established.

### A. Discharge Prohibitions.

This permit implements discharge prohibitions that are applicable under sections III.I.1.a, III.I.3.a, and III.I.4.a of the California Ocean Plan.

### B. Technology-Based Effluent Limitations.

#### 1. Scope and Authority.

Technology-based effluent limitations require a minimum level of treatment for industrial/municipal point sources based on currently available treatment technologies while allowing the Discharger to use any available control techniques to meet the effluent limits. The 1972 CWA required POTWs to meet performance requirements based on available wastewater treatment technology. Section 301 of the CWA established a required performance level--referred to as "secondary treatment" --that all POTWs were required to meet by July 1, 1977. More specifically, section 301(b)(1)(B) of the CWA required that USEPA develop secondary treatment standards for POTWs as defined in section 304(d)(1). Based on this statutory requirement, USEPA developed national secondary treatment regulations which are specified in 40 CFR § 133. These technology- based regulations apply to all POTWs and identify the minimum level of effluent quality to be attained by secondary treatment in terms of $BOD_5$20°C, TSS, and pH.

#### 2. Applicable Technology-Based Effluent Limitations

Section 301(b) of the CWA and implementing USEPA permit regulations at 40 CFR § 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and more stringent effluent limitations necessary to meet minimum federal technology-based requirements based on Secondary Standards at 40 CFR § 133 and Best Professional Judgment (BPJ) in accordance with 40 CFR § 125.3. Secondary treatment is defined in terms of three parameters – $BOD_5$20°C, TSS, and pH.

The following summarizes the technology-based requirements for secondary treatment, which are applicable to the Facility:

**Table F-9. Summary of TBELs in 40 CFR part 133.102**

| Parameter | Units | Effluent Limitations | | |
|---|---|---|---|---|
| | | Average Monthly | Average Weekly | Percent Removal [4] |
| $BOD_5$20°C | mg/L | 30 mg/L | 45 mg/L | 85 |
| TSS | mg/L | 30 mg/L | 45 mg/L | 85 |
| pH | 6.0 to 9.0 pH Units | | | |

Also, Table 2 of the 2015 Ocean Plan establishes the following TBELs for POTWs, which are applicable to the Plant:

**Table F-10. Summary of TBELs for POTWs established by the 2015 Ocean Plan**

| Parameter | Units | Effluent Limitations | | |
|---|---|---|---|---|
| | | Average Monthly | Average Weekly | Instantaneous Maximum |
| Oil & Grease | mg/L | 25 | 40 | 75 |

[4] Percent removal limit does not apply to the AWPF influent.

| Parameter | Units | Effluent Limitations | | |
|---|---|---|---|---|
| | | Average Monthly | Average Weekly | Instantaneous Maximum |
| TSS | mg/L | [5] | | |
| Settleable Solids | mL/L | 1.0 | 1.5 | 3.0 |
| Turbidity | NTU | 75 | 100 | 225 |
| Removal Efficiency for TSS | % | 75[5] | -- | -- |
| pH | 6.0 to 9.0 pH units | | | |

All TBELs from Order No. R4-2013-0094 for $BOD_5 20^oC$, TSS, oil and grease, settleable solids, pH, and turbidity, are retained by this Order. All TBELs are independent of the dilution ratio for the discharge outfall. In addition to the concentration-based effluent limitations, mass-based effluent limitations based on the flow rate of 31.7 MGD used in Order R4-2013-0094, are also included.

The following table summarizes the TBELs for the discharge from the Facility.

**Table F-11. Summary of TBELs for Discharge Point 001**

| Parameter | Units | Effluent Limitations | | | | |
|---|---|---|---|---|---|---|
| | | Average Monthly | Average Weekly | Maximum[6] Daily | Instantaneous Minimum | Instantaneous Maximum[7] |
| $BOD_5 20^0C$[8] | mg/L | 30 | 45 | -- | -- | -- |
| | lbs/day[9] | 7,960 | 11,900 | -- | -- | -- |
| | % removal | 85 | -- | -- | -- | -- |
| Total Suspended Solids | mg/L | 30 | 45 | -- | -- | -- |
| | lbs/day[9] | 7,960 | 11,900 | -- | -- | -- |
| | % removal | 85 | -- | -- | -- | -- |
| Oil and Grease | mg/L | 25 | 40 | | -- | 75 |
| | lbs/day[9] | 6,630 | 10,600 | -- | -- | 19,900 |
| Settleable Solids | ml/L | 1.0 | 1.5 | | -- | 3.0 |

[5] Dischargers shall, as a 30-day average, remove 75% of TSS from the influent stream before discharging wastewater to the ocean, except that the effluent limitation to be met shall not be lower than 60 mg/L.

[6] The maximum daily effluent limitations shall apply to flow weighted 24-hour composite samples

[7] The instantaneous maximum effluent limitations shall apply to grab samples.

[8] Compliance for BOD percent removal is at EFF-001A. Weekly Average and Monthly may be calculated from daily measurements.

[9] The mass emission rates are based on the design flow of 31.7 MGD, and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day. During wet-weather storm events in which the flow exceeds the design capacity, the mass discharge rate limitations shall not apply, and concentration limitations will provide the only applicable effluent limitations.

| Parameter | Units | Effluent Limitations | | | | |
|---|---|---|---|---|---|---|
| | | Average Monthly | Average Weekly | Maximum[6] Daily | Instantaneous Minimum | Instantaneous Maximum[7] |
| Turbidity | NTU | 75 | 100 | -- | -- | 225 |
| pH | pH unit | Within the limit of 6.0 - 9.0 at all times | | | | |

## C. Water Quality-Based Effluent Limitations (WQBELs)

### 1. Scope and Authority.

Section 301(b) of the CWA and 40 CFR § 122.44(d) require that permits include limitations more stringent than applicable technology-based requirements where necessary to achieve water quality standards and State requirements. 40 CFR § 122.44(d)(1)(i) requires that permits include WQBELs for all pollutants which are or may be discharged at levels having the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives or criteria within a standard. USEPA has applied CWA section 403(c) and 40 CFR § 125, Subpart M, following 40 CFR § 122. Where reasonable potential has been established for a pollutant to cause, or contribute to an excursion above a narrative criterion within an applicable State water quality standard, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the Ocean Plan.

### 2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan and Ocean Plan establish the beneficial uses and Water Quality Objectives for ocean waters of the State. The beneficial uses of the receiving waters affected by the discharge have been described previously in this Fact Sheet. The Basin Plan contains Water Quality Objectives for bacteria for water bodies designated for water contact recreation and the Ocean Plan contains water quality objectives for bacterial, physical, chemical, and biological characteristics, and radioactivity. The Water Quality Objectives from the Ocean Plan and Basin Plan were incorporated into this Order as either final effluent limitations (based on reasonable potential) or receiving water limitations.

### 3. Expression of WQBELs

Pursuant to 40 CFR § 122.45(d)(2), for POTW continuous discharges, all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall, unless impracticable, be stated as average weekly and average monthly discharge limitations. It is impracticable to include only average weekly and average monthly effluent limitations in the Order because a single daily discharge of certain pollutants, in excess amounts, can cause violations of water quality objectives.

The effects of pollutants on aquatic organisms are often rapid. For many pollutants, an average weekly or average monthly effluent limitation alone is not sufficiently protective of beneficial uses. As a result, maximum daily effluent limitations, as referenced in 40 CFR § 122.45(d), are included in the Order for certain constituents.

The WQBELs for marine aquatic life toxics contained in this Order are based on Table 1 water quality objectives contained in the 2015 Ocean Plan that are expressed as six-month median, daily maximum, and instantaneous maximum water quality objectives. However, in the existing Order (Order No. R4-2013-0094), the calculated effluent limitations based on 6-month median objectives for marine aquatic life toxics in the 2009 Ocean Plan were prescribed as average monthly limitations. Applying the antibacksliding regulations, this Order retains the same approach and sets effluent limitations derived from six-month median water quality objectives for marine aquatic life toxics in the 2015 Ocean Plan as average monthly limitations. In addition, the 2015 Ocean Plan specifies that for the six-month median for intermittent discharges, the daily value shall be considered to equal zero for days on which no discharge occurred.

4. **Determining the Need for WQBELs**

Order No. R4-2013-0094 contains effluent limitations for the conventional, non-conventional and toxic pollutant parameters in Table 1 of the Ocean Plan. For this Order, the need for effluent limitations based on water quality objectives in Table 1 of the 2015 Ocean Plan was reevaluated in accordance with the Reasonable Potential Analysis (RPA) procedures contained in Appendix VI of the 2015 Ocean Plan. This statistical RPA method (RPcalc version 2.2) accounts for the averaging period of the water quality objective, accounts for and captures the long-term variability of the pollutant in the effluent, accounts for limitations associated with sparse data sets, accounts for uncertainty associated with censored data sets, and assumes a lognormal distribution of the facility-specific effluent data. The program calculates the upper confidence bound (UCB) of an effluent population percentile after complete mixing. In the evaluation employed in this Order, the UCB is calculated as the one-sided, upper 95th percent confidence bound for the 95th percentile of the effluent distribution after complete mixing. The calculated UCB95/95 is then compared to the appropriate objective to determine the potential for an exceedance of that objective and the need for an effluent limitation. For constituents that have an insufficient number of monitoring data or a substantial number of non-detected data with a reporting limit higher than the respective water quality objective, the RPA result is likely to be inconclusive. The Ocean Plan requires that existing effluent limitations for these constituents are retained in the new Order, and the permit shall include a reopener clause to allow for subsequent modification of the permit to include an effluent limitation if monitoring establishes that the discharge causes, has the reasonable potential to cause, or contributes to an excursion above a water quality objective. WQBELs were calculated using monitoring data collected between August 2013 and December 2017, and through July 2018 for ammonia, where concentrations are changing more rapidly.

In general, for constituents that have been determined to have no reasonable potential to cause, or contribute to, excursions of water quality objectives, no numerical limits are prescribed; instead a narrative statement to comply with all Ocean Plan requirements is provided and the Discharger is required to monitor for these constituents to gather data for use in RPAs for future Order renewals and/or updates.

For Discharge Point 001, inconclusive results were reported for cyanide, acrolein, chlorobenzene, ethylbenzene, toluene, tributyltin, 1,1,1-trichloroethane, acrylonitrile, benzene, benzidine, carbon tetrachloride, chlordane, chlorodibromomethane, DDT, 3,3' dichlorobenzidine, 1,2 dichloroethane, dichlorobromomethane, dichloromethane, 1,3-

dichloropropene, halomethanes, hexachlorobenzene, PAH, PCBs, TCDD, 1,1,2,2,-tetrachloroethane, tetrachloroethane, toxaphene, trichloroethylene, 1,2,3 trichloroethane and vinyl chloride. For benzidine, PCB and TCDD equivalents limits from the previous permit have been met with the existing treatment system and were applied in this Order, even though the results of the reasonable potential analysis were inconclusive. For each of the other constituents listed as inconclusive, less than 20% of the measurements included a detection, and for most, no detections were made. For the pollutants that have not been detected in the final effluent, the Discharger has made, and continues to make, an effort to achieve lower detection limits than are required in the 2015 Ocean Plan or 40 CFR 136. The permit includes a reopener to incorporate a new limit or performance goal based on an updated reasonable potential analysis. The MRP (Attachment E) of this Order also requires the Discharger to continue to monitor these constituents.

Bacteria were not found to have a reasonable potential to cause or exceed water quality criteria and no WQBELs for bacteria are proposed. Bacteria sampling is required at EFF-001A to demonstrate successful disinfection has resulted from secondary treatment. The 2015 Ocean Plan includes limits for bacteria in the public contact zones bounded by the shoreline and a distance of 1,000 feet. The State Water Resource Control Board Division of Drinking Water sets minimum protective bacteriological standards in the areas designated by the Los Angeles Regional Water Quality Control Plan (Basin Plan) for water-contact sport areas (REC-1) and shell-fish harvesting (SHELL), although these standards may not apply during a wet weather events. Compliance with bacteria criteria is demonstrated in this Order by receiving water monitoring between the outfall and the shoreline. The majority of measurements for fecal indicator bacteria, collected in the ocean near the Oxnard outfall between 2015 and 2017, were below the method detection limit (<2 MPN/100 mL). Indicator bacteria, including total and fecal coliforms, and enterococcus bacteria were not detected at the surface and or at depth further than 1000 feet from the zone of initial dilution. In all cases, indicator bacteria concentrations were below Basin Plan standards. Where bacteria standards have been routinely exceeded at the shore-line in this Region, this monitoring practice allows the development of a regulatory device such as the Santa Monica Bay Beaches Wet Weather Bacteria Total Maximum Daily Load Resolution No. 2006-005, which identified wet weather overland flow as the source of the bacteria, and successfully reduced beach bacteria through the control of storm water discharge.

5. **WQBEL Calculations**

From the Table 1 water quality objectives of the Ocean Plan, WQBELs are calculated according to the following equation for all pollutants, except for acute toxicity (if applicable) and radioactivity:

**Ce=Co + Dm (Co-Cs)**

Where

Ce = the effluent limitation (µg/L)

Co = the water quality objective to be met at the completion of initial dilution (µg/L)

Cs = background seawater concentration (µg/L) (see Table F-13 below)

Dm = minimum probable initial dilution expressed as parts seawater per part wastewater

Initial dilution is the process that results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge. For a submerged buoyant

discharge, characteristic of most municipal and industrial wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

A 2017 dilution study confirmed the initial dilution factor (Dm) of 1:108 can apply. The value of Dm is described in detail in section I.B. of this Fact Sheet. Based on Table 3 of the 2015 Ocean Plan, Cs is equal to zero for all pollutants except the following:

**Table F-12. Pollutants with Background Seawater Concentration**

| Constituent | Background Seawater Concentration (Cs) |
|---|---|
| Arsenic | 3 µg/L |
| Copper | 2 µg/L |
| Mercury | 0.0005 µg/L |
| Silver | 0.16 µg/L |
| Zinc | 8 µg/L |

Although a reasonable potential to cause or contribute to the exceedance of a water quality objective was not identified for chlorine residual or ammonia at Discharge Point 001, the calculations of the WQBELs are provided as an example.

**Table F-13. Ocean Plan Water Quality Objectives (Co)**

| Constituents | 6-Month Median | Daily Maximum | Instantaneous Maximum |
|---|---|---|---|
| Chlorine Residual | 2 µg/L | 8 µg/L | 60 µg/L |
| Ammonia | 0.60 mg/L | 2.4 mg/L | 6 mg/L |

Using the equation, **Ce=Co + Dm (Co-Cs),** effluent limitations would be calculated as follows, before rounding to two significant digits, for discharge through Discharge Point 001, with a dilution ratio (Dm) of 1:108.

**Chlorine Residual**

Ce = 2 + 108 (2-0) = 218 µg/L (6 Month Median and Monthly Average)

Ce = 8 + 108 (8-0) = 872 µg/L (Daily Maximum)

Ce = 60 + 108 (60-0) = 6,540 µg/L (Instantaneous Maximum)

Chlorine residual shows no reasonable potential to cause or contribute to an exceedance of the Ocean Plan water quality objective of 2 µg/L. While wastewater disinfection with chlorine usually produces the chlorine residual and the byproducts of chlorination are highly toxic to aquatic life, the maximum monthly chlorine residual at EFF-001B was 0.08 mg/L and below the 2013 Performance Goal (PG) of 0.1 µg/L, so no limit was applied. Retention of the PG from the 2013 Order will ensure chlorine residual effluent concentration will remain lower than if the limit of 218 µg/L was imposed as an average monthly average. The final PG for chlorine residual is 0.1 µg/L.

**Ammonia**

Ce = 0.6 + 108(0.6-0) = 65 mg/L (6 Month Median and Monthly Average)

Ce = 2.4 + 108(2.4-0) = 262 mg/L mg/L (Daily Maximum)

Ce = 6 + 108(6-0) = 654 mg/L (Instantaneous Maximum)

Ammonia shows no reasonable potential to cause or contribute to an exceedance of the Ocean Plan water quality objective of 0.60 mg/L. The maximum monthly effluent concentration for ammonia of 49.1 mg/L remains lower than the six-month median and monthly average limit based on the Ocean Plan of 65 mg/L. The ammonia limits calculated here are not incorporated into this Order. The Performance Goal (PG) was calculated to be 51.8 mg/L using EFF-001B monitoring data collected between January 2016 and July 2018.

**Radioactivity**:

The water quality objective for radioactivity in the 2015 California Ocean Plan states the value is not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, section 30253 of the California Code of Regulations and future changes to incorporate provisions of federal law as the changes take effect. This regulation does not establish a numerical effluent limit for radionuclides. During the preparation of R4-2013-0094, Regional Water Board staff used Best Professional Judgment (BPJ) to establish radioactivity limits based on maximum effluent concentrations of 10.2 pCi/L for gross alpha and 50 for gross beta radioactivity. These limits are maintained because the existing limit of 50 pCi/L for gross beta was exceeded with a measure of 94 pCi/L. The Discharger conducted additional analysis of radium 226 and 228 as required by R4-2013-0094, and confirmed that no additional radionuclides were present at levels above the minimum detection levels. The Discharger determined that the exceedance of gross beta of 94, as a maximum monthly average in August 2014, could be attributed to discharge from a single industrial source, the Santa Clara Wastewater facility. While the industry no longer discharges to the collection system and compliance is expected, the limits are retained should the City wish to retain their discretion to accept new industries which treat radioactive oil field waste.

Based on the implementing procedures described above, effluent limitations were evaluated for Table 1 pollutants (excluding acute toxicity and radioactivity) from the 2015 Ocean Plan. No new limits have been incorporated into this Order. The proposed WQBELs in Table F-14 are all retained from the previous Order because there is insufficient evidence to determine there is no reasonable potential that the discharge will cause or contribute to the exceedance of some water quality objectives, and, in the case of radioactivity, because future sources could be permitted.

**Table F-14. Proposed Water Quality Objectives (Ce)**

| Constituents | Units | Average Monthly | Instantaneous Maximum Daily[5] |
|---|---|---|---|
| Gross alpha | pCi/L | | 15 |
| Gross beta | pCi/L | | 50 |
| Combined radium 226-228 | pCi/L | | 5 |
| Tritium | pCi/L | | 20,000 |
| Strontium 90 | pCi/L | | 8 |
| Uranium | pCi/L | | 20 |
| Benzidine | µg/L | .0068 | |
| PCB | µg/L | .0019 | |
| TCDD | µg/L | .00000039 | |

6. **Whole Effluent Toxicity (WET).**

Whole effluent toxicity (WET) testing protects receiving waters from the aggregate toxic effect of a mixture of pollutants in the effluent or pollutants that are not typically monitored. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a short or a longer period of time and may measure a sublethal endpoint such as reproduction or growth in addition to mortality. A constituent present at low concentrations may exhibit a chronic effect; however, a higher concentration of the same constituent may be required to produce an acute effect. Because of the nature of industrial discharges into the POTW sewershed, toxic constituents (or a mixture of constituents exhibiting toxic effects) may be present in the OWTP effluent.

A total of 108 chronic toxicity tests were conducted on OWTP final effluent between August 2013 and December 2017. None exceeded the 99 TUc maximum daily final effluent limitation for chronic toxicity. The discharge did not exhibit reasonable potential to exceed the water quality objectives for chronic toxicity at the discharge point based on 2015 Ocean Plan procedures for calculating reasonable potential.

The Ocean Plan addresses the application of chronic and acute toxicity requirements based on minimum probable dilutions (Dm) for ocean discharges. Following the 2015 Ocean Plan, dischargers are required to conduct chronic toxicity monitoring for ocean discharges with Dm factors ranging from 99 to 349 and Regional Water Boards may require acute toxicity monitoring in addition to chronic toxicity monitoring. Dischargers with Dm factors below 99 are required to conduct only chronic toxicity testing. The Dm for Discharge Point 001 is 108. The Dm is more than 99 for the outfall, even though the discharge does not exhibit reasonable potential to exceed the water quality objectives for chronic toxicity, the chronic toxicity final effluent limitation is maintained to ensure increases in brine concentration with process modification of the AWPF do not result in toxicity. No acute toxicity final effluent limitations have been assigned to the discharge since it is not required for this discharge point based on the requirements in the 2015 Ocean Plan and since the discharge did not exhibit reasonable potential to exceed the water quality objectives for acute toxicity.

The Ocean Plan establishes a daily maximum chronic toxicity objective of 1.0 TUc = 100/(No Observed Effect Concentration (NOEC)), using a 5-concentration hypothesis test, and a daily maximum acute toxicity objective of 0.3 TUa = 100/LC50, using a point estimate model. This Order/Permit includes final effluent limitations using the Test of Significant Toxicity (TST) hypothesis testing approach. This statistical approach is consistent with the Ocean Plan in that it provides maximum protection to the environment since it more reliably identifies acute and chronic toxicity than the current NOEC hypothesis-testing approach (See *2015 California Ocean Plan, section III.F and Appendix I*).

On July 07, 2014, the Chief Deputy of the Water Quality Division announced that the State Water Board would be releasing a revised version of the Chronic Toxicity Plan for public comment within a few weeks. Regional Water Board staff awaits its release. Nevertheless, this Order/Permit contains a reopener to allow the Regional Water Board to modify the permit in the future, if necessary, to make it consistent with any new policy, plan, law, or regulation.

For this permit, chronic toxicity in the discharge is evaluated using a maximum daily effluent limitation that utilizes USEPA's 2010 TST hypothesis testing approach. The

chronic toxicity effluent limitations are expressed as "Pass" for each maximum daily individual result.

In January 2010, USEPA published a guidance document titled EPA Regions 8, 9 and 10 Toxicity Training Tool, which among other things discusses permit limit expression for chronic toxicity. The document acknowledges that NPDES regulations at 40 CFR § 122.45(d) require that all permit limits be expressed, unless impracticable, as an Average Weekly Effluent Limitation (AWEL) and an Average Monthly Effluent Limitation (AMEL) for POTWs. Following section 5.2.3 of the Technical Support Document (TSD), the use of an AWEL is not appropriate for WET. In lieu of an AWEL for POTWs, USEPA recommends establishing a Maximum Daily Effluent Limitation (MDEL) for toxic pollutants and pollutants in water quality permitting, including WET. For an ocean discharge, this is appropriate because the 2015 Ocean Plan only requires a MDEL and does not include Average Monthly or Average Weekly Effluent Limitations for chronic toxicity (See 2015 California Ocean Plan, section II.D.7.).

The MDEL is the highest allowable value for the discharge measured during a calendar day or 24-hour period representing a calendar day. The AMEL is the highest allowable value for the average of daily discharges obtained over a calendar month. For WET, this is the average of individual WET test results for that calendar month. In June 2010, USEPA published another guidance document titled *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, June 2010), in which they recommend the following: "Permitting authorities should consider adding the TST approach to their implementation procedures for analyzing valid WET data for their current NPDES WET Program." The TST approach is another statistical option for analyzing valid WET test data. Use of the TST approach does not result in any changes to EPA's WET test methods. Section 9.4.1.2 of USEPA's *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/0136,1995), recognizes that, "the statistical methods recommended in this manual are not the only possible methods of statistical analysis." The TST approach can be applied to acute (survival) and chronic (sublethal) endpoints and is appropriate to use for both freshwater and marine EPA WET test methods.

The interpretation of the measurement result from USEPA's TST statistical approach (Pass/Fail) for effluent and receiving water samples is, by design, independent from the concentration-response patterns of the toxicity tests for samples when it is required. Therefore, when using the TST statistical approach, application of USEPA's 2000 guidance on effluent and receiving waters concentration-response patterns will not improve the appropriate interpretation of TST results as long as all Test Acceptability Criteria and other test review procedures – including those related to Quality Assurance for effluent and receiving water toxicity tests, reference toxicant tests, and control performance (mean, standard deviation, and coefficient of variation) – described by the WET test methods manual and TST guidance, are followed. The 2000 guidance may be used to identify reliable, anomalous, or inconclusive concentration-response patterns and associated statistical results to the extent that the guidance recommends review of test procedures and laboratory performance already recommended in the WET test methods manual. The guidance does not apply to single concentration (IWC) and control statistical t-tests and does not apply to the statistical assumptions on which the TST is based. The Regional Water Board and USEPA will not consider a concentration-response pattern as a sufficient basis to determine that a TST t-test result for a toxicity test is anything other than valid, absent other evidence. In a toxicity laboratory, unexpected concentration-response patterns should not occur with any regular frequency

and consistent reports of anomalous or inconclusive concentration-response patterns or test results that are not valid will require an investigation of laboratory practices.

Any Data Quality Objectives or Standard Operating Procedure used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent or receiving water toxicity test measurement results from the TST statistical approach, which include a consideration of concentration-response patterns and/or Percent Minimum Significant Differences (PMSD)s, must be submitted for review by the Regional Water Board, in consultation with USEPA and the State Water Board's Quality Assurance Officer and Environmental Laboratory Accreditations Program (40 CFR § 122.44(h)). The PMSD criteria only apply to compliance for NOEC and the sublethal endpoints of the NOEC, and therefore are not used to interpret TST results.

## D. Final Effluent Limitation Considerations

### 1. Anti-Backsliding Requirements.

The final effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order, No. R4-2013-0094. Section 402(o)(2) of the CWA provides statutory exceptions to the general prohibition of backsliding contained in CWA section 402(o)(1).

The final effluent limitations for heptachlor epoxide for Discharge Point 001 were removed because new monitoring data indicated that the effluent did not have reasonable potential to cause or contribute to an exceedance of the applicable water quality objectives. The original limit had been applied in the absence of reliable effluent data because the analytical method detection level approximated the limit. The removal of the final effluent limitations for heptachlor epoxide will therefore not authorize a change in the mass emission rates or a relaxation in the treatment of the discharge and meets the backsliding exception under CWA section 303(d)(4)(B).

The dilution ratio for Discharge Point 001 increased from 1:98 to 1:108 based on the results of the 2017 dilution study, but no water quality based effluent limits were changed as a result, and technically based effluent limits do not vary with the dilution. However, the chronic toxicity final effluent limitations for Discharge Point 001 were revised based on a new dilution ratio. The resulting IWC for chronic toxicity decreased slightly from 1.02% effluent in the 2013 permit to 0.93% effluent (see section IV.C.6.) in this Order. The treatment process is maintained and all constituents are discharged at concentrations below Ocean Plan limits after dilution, so the change continues to be consistent with the Ocean Plan Water Quality Objectives and will not unreasonably affect present and anticipated beneficial uses of the Pacific Ocean in the vicinity of Ormond Beach. This is consistent with the antidegradation policy and therefore meets the backsliding exception under CWA section 402(o)(1)/303(d)(4).

The accompanying monitoring and reporting program requires continued data collection and if monitoring data show reasonable potential for a constituent to cause or contribute to an exceedance of water quality standards, the Order will be reopened to incorporate WQBELs. Such an approach ensures that the discharge will adequately protect water quality standards for designated beneficial uses and conform with antidegradation policies and antibacksliding provisions.

### 2. Antidegradation Policies

This Order includes both narrative and numeric final effluent limitations, receiving water limitations, performance goals, and mass emission benchmarks to maintain the chemical, physical, and biological characteristics, and to protect the beneficial uses of the receiving water. These requirements ensure that all water quality objectives are

being met outside the zone of initial dilution, thereby maintaining the beneficial uses. The Ocean Plan allows for minimal degradation within the zone of initial dilution as long as the water quality objectives are maintained just outside the zone of initial dilution. The minimal degradation permitted by the Ocean Plan is consistent with the antidegradation policy because it maintains maximum benefit to the people of the State, it will not unreasonably affect the present and anticipated beneficial uses, and it will not result in water quality less than that prescribed in the policies.

The final effluent limitations from the previous order have been retained in this Order/Permit, except for heptachlor epoxide. Under CWA sections 402(o)(1)/303(d)(4)(B) for waters in attainment, removal of the final effluent limitations for heptachlor epoxide for the Discharge Point 001 is consistent with the antidegradation provisions of 40 CFR part 131.12 and State Water Board Resolution No. 68-16 because the constituent has no reasonable potential to cause or contribute to an exceedance of a water quality objective and so the discharge at this outfall will not degrade existing high-quality water.

The mass-based final effluent limitations continue to be based on the design flow rate of 31.7 MGD.

3. **Stringency of Requirements for Individual Pollutants**

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on $BOD_5 20^0C$, TSS, turbidity, oil and grease and pH. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and the applicable federal water quality standards. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the Ocean Plan, which was approved by the USEPA on February 14, 2006 and has since been further amended. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by the USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR section 131.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order were approved by USEPA and are applicable water quality standards pursuant to section 131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

**Table F-15. Summary of Final Effluent Limitations for Discharge Point 001**

| Parameter | Units | Effluent Limitations[10] | | | | Performance Goals[11] | Basis |
|---|---|---|---|---|---|---|---|
| | | Average Monthly[12] | Average Weekly[13] | Maximum Daily[14] | Instantaneous Maximum[15] | | |
| $BOD_5 20^0C$[16] | mg/L | 30 | 45 | -- | -- | -- | Secondary Treatment |
| | lbs/day[17] | 7,960 | 11,900 | -- | -- | -- | |
| | % removal | 85 | -- | -- | -- | -- | |
| TSS | mg/L | 30 | 45 | -- | -- | -- | Secondary Treatment/ Ocean Plan |
| | lbs/day[17] | 7,960 | 11,900 | -- | -- | -- | |
| | % removal | 85 | -- | -- | -- | -- | |
| pH | pH unit | 6.0(instantaneous minimum)-9.0(instantaneous maximum) | | | | | Secondary Treatment/ Ocean Plan |
| Oil and Grease | mg/L | 25 | 40 | | 75 | -- | Secondary Treatment/ Ocean Plan |
| | lbs/day[17] | 6,630 | 10,600 | | 19,900 | -- | |
| Settleable Solids | ml/L | 1.0 | 1.5 | | 3.0 | | Secondary Treatment/ Ocean Plan |
| Turbidity | NTU | 75 | 100 | | 225 | | Secondary Treatment/ Ocean Plan |
| Temperature | °F | | | | 100 | | Thermal Plan |

[10] The minimum dilution ratio used to calculate effluent limitations for nonconventional and toxic pollutants for Discharge Point 001 is 1: 108 for all (i.e., 108 parts sea water to one-part effluent)

[11] The performance goals are based upon the actual performance data of the Oxnard Wastewater Treatment Plant and are specified only as an indication of the treatment efficiency of the plant. They are not considered effluent limitations or standards for the treatment plant. The Discharger shall make best efforts to maintain, if not improve, the effluent quality at the level of these performance goals. The Executive Officer of the Regional Water Board may modify any of the performance goals if the Discharger requests and has demonstrated that the change is warranted. See Procedures for the determination of performance goals at section V. of Fact Sheet.

[12] Average monthly effluent limitations for benzidine, PCBs, and TCDD equivalents at Discharge Point 001 are based on the 6-month median water quality objectives in the 2015 Ocean Plan.

[13] For intermittent discharges, the daily value used to calculate the average monthly values shall be considered to equal zero for days on which no discharge occurred.

[14] The maximum daily, average weekly and average monthly effluent limitations shall apply to flow weighted 24-hour composite samples. They may apply to grab samples if the collection of composite samples for those constituents is not appropriate because of the instability of the constituents.

[15] The instantaneous maximum effluent limitations shall apply to grab samples.

[16] Average Weekly and Monthly values may be calculated from daily measurements. Compliance with BOD and TSS, and BOD and TSS % removal at EFF-001A.

[17] The mass emission rates are based on the existing plant design flow rate of 31.7 MGD plus the brine waste, and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.

| Parameter | Units | Effluent Limitations[10] | | | | Perform-ance Goals[11] | Basis |
|---|---|---|---|---|---|---|---|
| | | Average Monthly [12] | Average Weekly[13] | Maximum Daily[14] | Instan-taneous Maximum [15] | | |
| Arsenic | µg/L | -- | -- | -- | -- | 2[18] | No RP |
| Cadmium | µg/L | -- | -- | -- | -- | 1[19] | No RP |
| Chromium (VI)[20] | µg/L | -- | -- | -- | -- | 8 | No RP |
| Copper | µg/L | -- | -- | -- | -- | 30 | No RP |
| Lead | µg/L | -- | -- | -- | -- | 23 | No RP |
| Mercury | µg/L | -- | -- | -- | -- | 0.3 | No RP |
| Nickel | µg/L | -- | -- | -- | -- | 8 | No RP |
| Silver | µg/L | -- | -- | -- | -- | 2.5 | No RP |
| Selenium | µg/L | -- | -- | -- | -- | 6.4 | No RP |
| Zinc | µg/L | -- | -- | -- | -- | 35 | No RP |
| Cyanide | µg/L | -- | -- | -- | -- | 25 | No RP |
| Chlorine Residual | µg/L | -- | -- | -- | -- | 0.13 | No RP |
| Ammonia as N | mg/L | -- | -- | -- | -- | 51.8 | No RP |
| Phenolic compounds non-chlorinated | µg/L | -- | -- | -- | -- | 5 | No RP |
| Phenolic compoundschl orinated | µg/L | -- | -- | -- | -- | 0.42 | No RP |
| Endosulfan | µg/L | -- | -- | -- | -- | 0.05 | No RP |
| HCH | µg/L | -- | -- | -- | -- | 0.1 | No RP |
| Endrin | µg/L | -- | -- | -- | -- | 0.05 | No RP |
| **Chronic toxicity (TST)[21]** | Pass or Fail | -- | -- | Pass | -- | -- | Ocean Plan |

[18] The existing performance goal is carried forward based on best professional judgement because new information would otherwise call for a relaxation of the PG.

[19] When conclusive but nonparametric finding of no reasonable potential is found, best professional judgement is used to retain existing PG.

[20] See Attachment A for definitions of terms.

[21] The Chronic Toxicity final effluent limitation is protective of both the numeric acute and chronic toxicity 2015 Ocean Plan water quality objectives. The final effluent limitation will be implemented using *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995), current USEPA guidance in the *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, June 2010) (http://water.epa.gov/polwaste/npdes/basics/upload/wet_final_tst_implementation2010.pdf) and *EPA Regions 8, 9, and 10, Toxicity Training Tool (January 2010)*. The Maximum Daily Effluent Limitation (MDEL) shall be reported as "Pass" or "Fail." (Also % Effect (percent effect) shall be reported.) See the MRP

| Parameter | Units | Effluent Limitations[10] | | | | Perform-ance Goals[11] | Basis |
|---|---|---|---|---|---|---|---|
| | | Average Monthly [12] | Average Weekly[13] | Maximum Daily[14] | Instan-taneous Maximum [15] | | |
| Radioactivity[22] | | | | | | | |
| **Gross alpha** | pCi/L | -- | -- | -- | 15 | -- | No RP, BPJ |
| **Gross beta** | pCi/L | -- | -- | -- | 50 | -- | No RP, BPJ |
| **Combined Radium226 and 228** | pCi/L | -- | -- | -- | 5 | -- | No RP, BPJ |
| **Tritium** | pCi/L | -- | -- | -- | 20,000 | -- | No RP, BPJ |
| **Strontium 90** | pCi/L | -- | -- | -- | 8 | -- | No RP, BPJ |
| **Uranium** | pCi/L | -- | -- | -- | 20 | -- | No RP, BPJ |
| Human Health Toxicants – Non-Carcinogens | | | | | | | |
| Acrolein | µg/L | -- | -- | -- | -- | 10 | No RP |
| Antimony | µg/L | -- | -- | -- | -- | 2.5 | No RP |
| Bis (2-chloro ethoxy) methane | µg/L | -- | -- | -- | -- | 25 | No RP |
| Bis (2-chloro-isopropyl) ether | µg/L | -- | -- | -- | -- | 10 | No RP |
| Chloro-benzene | µg/L | -- | -- | -- | -- | 2.5 | No RP |
| Chromium III | µg/L | | | | | 8 | No RP |
| Di-n-butyl-phthalate | µg/L | -- | -- | -- | -- | 0.33 | No RP |
| Dichloro-benzenes | µg/L | -- | -- | -- | -- | 2.5 | No RP |
| Diethyl phthalate | µg/L | -- | -- | -- | -- | 0.25 | No RP |
| Dimethyl phthalate | µg/L | -- | -- | -- | -- | 10 | No RP |
| 2-Methyl-4,6-dinitrophenol | µg/L | -- | -- | -- | -- | 25 | No RP |
| 2,4-Dinitrophenol | µg/L | -- | -- | -- | -- | 25 | No RP |
| Ethyl benzene | µg/L | -- | -- | -- | -- | 2.5 | No RP |
| Fluoranthene | µg/L | -- | -- | -- | -- | 0.25 | No RP |
| Hexachloro-cyclopenta-dine | µg/L | -- | -- | -- | -- | 25 | No RP |
| Nitro-benzene | µg/L | -- | -- | -- | -- | 5 | No RP |
| Thallium | µg/L | -- | -- | -- | -- | 5 | No RP |

[22] Radioactivity: As noted in the 2015 California Ocean Plan: Not to exceed limits specified in Title 17, division 1, chapter 5, subchapter 4, group 3, article 3, section 30253 of the California Code of Regulations (CCR). Reference to section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.

| Parameter | Units | Effluent Limitations[10] | | | | Perform-ance Goals[11] | Basis |
|---|---|---|---|---|---|---|---|
| | | Average Monthly [12] | Average Weekly[13] | Maximum Daily[14] | Instan-taneous Maximum [15] | | |
| Toluene | µg/L | -- | -- | -- | -- | 0.6 | No RP |
| Tributyltin | µg/L | -- | -- | -- | -- | 0.0263 | No RP |
| 1,1,1-Trichloro-ethane | µg/L | -- | -- | -- | -- | 2.5 | No RP |
| Human Health Toxicants – Carcinogens | | | | | | | |
| Acrylonitrile | µg/L | -- | -- | -- | -- | 10 | No RP |
| Aldrin | µg/L | -- | -- | -- | -- | 0.025 | No RP |
| Benzene | µg/L | -- | -- | -- | -- | 2.5 | No RP |
| **Benzidine** | µg/L | 0.0068 | -- | -- | -- | -- | Inconclusive RP, Existing Limit |
| | lbs/day[17] | 0.0018 | -- | -- | -- | | |
| Beryllium | µg/L | -- | -- | -- | -- | 2.5 | No RP |
| Bis (2-chloroethyl) ether | µg/L | -- | -- | -- | -- | 5 | No RP |
| Bis (2-ethylhexyl) phthalate | µg/L | -- | -- | -- | -- | 15 | No RP |
| Carbon tetrachloride | µg/L | -- | -- | -- | -- | 2.5 | No RP |
| Chlordane | µg/L | | -- | -- | -- | 0.5 | No RP |
| Chloro-dibromo-methane | µg/L | -- | -- | -- | -- | 1.3 | No RP |
| Chloroform | µg/L | -- | -- | -- | -- | 1.2 | No RP |
| DDT[20] | µg/L | -- | -- | -- | -- | 0.25 | No RP |
| 1,4-Dichloro-benzene | µg/L | -- | -- | -- | -- | 3 | No RP |
| 3,3'dichloro-benzidine | µg/L | | -- | -- | -- | 25 | No RP |
| 1,2-Dichloro-ethane | µg/L | -- | -- | -- | -- | 2.5 | No RP |
| 1,1-Dichloro-ethylene | µg/L | -- | -- | -- | -- | 2.5 | No RP |
| Bromodi-chloro-ethane | µg/L | -- | -- | -- | -- | 2.5 | No RP |
| Dichloro-methane | µg/L | -- | -- | -- | -- | 2.5 | No RP |
| 1,3-Dichloro-propene | µg/L | -- | -- | -- | -- | 2.5 | No RP |
| Dieldrin | µg/L | -- | -- | -- | -- | 0.05 | No RP |
| 2,4-Dinitrotoluene | µg/L | -- | -- | -- | -- | 25 | No RP |

| Parameter | Units | Effluent Limitations[10] | | | | Perform-ance Goals[11] | Basis |
|---|---|---|---|---|---|---|---|
| | | Average Monthly [12] | Average Weekly[13] | Maximum Daily[14] | Instan-taneous Maximum [15] | | |
| 1,2-Dipheny-lhydrazine | µg/L | -- | -- | -- | -- | 5 | No RP |
| Halo-methanes[20] | µg/L | -- | -- | -- | -- | 4.4 | No RP |
| Heptachlor | µg/L | -- | -- | -- | -- | 0.05 | No RP |
| Heptachlor epoxide | µg/L | -- | -- | -- | -- | 0.05[23] | No RP |
| Hexachloro-benzene | µg/L | -- | -- | -- | -- | 5 | No RP |
| Hexachloro-butadiene | µg/L | -- | -- | -- | -- | 5 | No RP |
| Hexachloro-ethane | µg/L | -- | -- | -- | -- | 5 | No RP |
| Isophorone | µg/L | -- | -- | -- | -- | 5 | No RP |
| N-Nitrosodi-methylamine | µg/L | -- | -- | -- | -- | 25 | No RP |
| N-Nitrosodi-N-propylamine | µg/L | -- | -- | -- | -- | 25 | No RP |
| N-Nitrosodi-phenylamine | µg/L | -- | -- | -- | -- | 5 | No RP |
| PAHs[20] | µg/L | -- | -- | -- | -- | 0.097 | No RP |
| **PCBs[20]** | µg/L | 0.0019 | -- | -- | -- | -- | Inconclusive RP, Existing Limit |
| | lbs/day[17] | 0.0005 | -- | -- | -- | -- | |
| **TCDD equivalents[20]** | µg/L | 0.00000039 | -- | -- | -- | | Inconclusive RP, Existing Limit |
| | lbs/day[17] | 0.0000001 | | | | | |
| 1,1,2,2-Tetrachloro-ethane | µg/L | -- | -- | -- | -- | 2.5 | No RP |
| Tetrachloro-ethylene | µg/L | -- | -- | -- | -- | 2.5 | No RP |
| Toxaphene | µg/L | -- | -- | -- | -- | 2.5 | No RP |
| Trichloro-ethylene | µg/L | -- | -- | -- | -- | 2.5 | No RP |
| 1,1,2-Tri-chloro-ethane | µg/L | -- | -- | -- | -- | 2.5 | No RP |
| 2,4,6-Tri-chloro-phenol | µg/L | -- | -- | -- | -- | 0.74 | No RP |
| Vinyl chloride | µg/L | -- | -- | -- | -- | 2.5 | No RP |

[23] A non paramateric RPA analysis concluded there was no need to maintain the limit in R4-2013-0094, as no detections were found. A value five times the minimum level in the 2015 Ocean Plan is used as the PG.

### E. Interim Effluent Limitations – Not Applicable

### F. Land Discharge Specifications – Not Applicable

### G. Recycling Specifications – Not Applicable

## V. PERFORMANCE GOALS

Section III.F.1, of the 2015 Ocean Plan allows the Regional Water Board to establish more restrictive water quality objectives and effluent limitations than those set forth in the 2015 Ocean Plan as necessary for the protection of the beneficial uses of ocean waters.

Pursuant to this provision and to implement the recommendation of the Water Quality Advisory Task Force (*Working Together for an Affordable Clean Water Environment, A final report presented to the California Water Quality Control Board, Los Angeles Region by Water Quality Advisory Task Force,* September 30, 1993) that was adopted by the Regional Water Board on November 1, 1993, performance goals that are more stringent than those based on Ocean Plan objectives are prescribed in this Order. This approach is consistent with the antidegradation policy in that it requires the Discharger to maintain its treatment level and effluent quality, recognizing normal variations in treatment efficiency and sampling and analytical techniques. However, this approach does not address substantial changes in treatment plant operations that could significantly affect the quality of the treated effluent.

While performance goals were previously placed in many POTW permits in the Region, they have been discontinued for inland surface water discharges. For inland surface waters, the California Toxics Rule (40 CFR § 131.38) has resulted in effluent limitations as stringent as many performance goals. However, the Ocean Plan allows for significant dilution, and the continued use of performance goals serves to maintain existing treatment levels and effluent quality and supports State and federal antidegradation policies.

The performance goals are based upon the actual performance of the OWTP and are specified only as an indication of the treatment efficiency of the Facility. Performance goals are intended to minimize pollutant loading (primarily for toxics), while maintaining the incentive for future voluntary improvement of water quality whenever feasible, without the imposition of more stringent limits based on improved performance. They are not considered enforceable limitations or standards for the regulation of the discharge from the treatment facility. The Executive Officer may modify any of the performance goals if the Discharger requests and has demonstrated that the change is warranted.

### A. Procedures for the Determination of Performance Goals

For constituents that have been routinely detected in the effluent (at least 20 percent detectable data), performance goals are based on the one-sided, upper 95 percent confidence bound for the 95th percentile of the effluent performance data (UCB95/95) from August 2013 through December 2017 using the RPA protocol contained in the 2015 Ocean Plan. Effluent data are assumed log normally distributed. Performance goals are calculated according to the equation PG = Co + Dm (Co-Cs) and setting Co = UCB95/95. The calculation of the performance goal for ammonia used the upper 99th percent confidence bound to optimize recycled water production.

1. If the maximum detected effluent concentration (MEC) is greater than the calculated performance goal, then the calculated performance goal is used as the performance goal;
2. If the maximum detected effluent concentration is less than the calculated performance goal, then the MEC is used as the performance goal, or;
3. If the performance goal determined in part 1 or 2 is greater than the WQO in the 2015 Ocean Plan after considering dilution, then the WQO is used as the performance goal.

For example, a performance goal for arsenic at Discharge Point 001 is calculated as follows:

**Arsenic**

Co = UCB95/95 = 2.9835; Dm = 108; Cs = 3

$C_{PG}$ = Performance Goal = 2.9835 + 108(2.9835-3) = 1.2015 µg/L

The existing PG in R4-2013-0094 is 2 µg/L and given that the overall system process will change to expand recycled water production, resulting in comingled discharges of concentrated brine, the existing PG is maintained where the data would otherwise lead to a reduction of the Performance Goal. The final arsenic PG is 2 µg/L.

In some cases where monitoring data might otherwise trigger a much higher Performance Goal (PG), the existing PG is maintained to continue or improve current performance. An example is hexavalent chromium, where the new Maximum Effluent Concentration (MEC) remains below the existing performance goal and insufficient data is present to develop a PG more refined than a high value of 25 µg/L, calculated from a multiple of the minimum level. The existing PG of 8 µg/L is maintained. The existing PG for trivalent chromium is also carried forward at 8 µg/L. Another example is mercury, where a higher performance goal was considered because the MEC of 0.38 µg/L exceeded the existing PG of 0.3, but the calculated higher PG of 2.5 µg/L was judged too large an increase in concentration to be allowed without triggering additional investigation into the source of the mercury given the 2014-2016 303(d) listing for historic mercury in the adjacent Santa Monica Bay.

For constituents where monitoring data have consistently shown nondetectable levels (less than 20 percent detectable data), the existing performance goals are maintained or set at 5 times the minimum level (ML) given in the 2015 Ocean Plan. If the maximum detected effluent concentration is less than the calculated value based on ML, then the MEC is used as the performance goal. In some cases where monitoring data might otherwise trigger a much higher Performance Goal (PG), the existing PG is maintained to continue or improve current performance. Examples are Di-n-Butyl Phthalate, Diethyl phthalate, Fluoranthene, Toluene, Tributyltin, and Chlorodibromomethane.

For nickel, where the MEC is below the performance goal of 8, the improved performance means the PG would go down. The existing value is maintained as the brine concentration change could result in increased levels, but still result in additional recycled water production and protection of marine aquatic life. Similarly, falling effluent concentrations for residual chlorine would otherwise result in a reduced PG, but the use of chlorine for disinfection during multiple treatment steps to optimize the production of recycled water increases the need for flexibility in performance. The existing residual chlorine value is used.

For lead, the existing PG of 23 µg/l is maintained and is above the detection of 19 µg/L. Detections of 5.7, 11.8 and 13.9 µg/L demonstrate that the metal is present in the effluent with some consistency. The data would result in a very small calculated performance goal of 2.5 µg/L, which could not be attained, but would lead to additional study about the source of the metal. In this case, existing lead concentration is known to be sourced by the collection system's historic piping, which is being replaced with construction upgrades. Maintaining the

performance goal will ensure this activity continues and protects against the introduction of new sources of lead.

The limit for heptachlor epoxide is no longer needed because monitoring data is present and no reasonable potential is present. The PG would be higher than the existing limit of 0.002 µg/L, so a PG of 0.05 is applied because there is no need to maintain continued performance at the lower level in the absence of reasonable potential to cause or contribute to the exceedance of a water quality objective.

Performance goals for Discharge Point 001 are prescribed in this Order. The listed performance goals are not enforceable effluent limitations or standards. The Discharger shall maintain, if not improve, its treatment efficiency. Any two exceedances of the performance goals shall trigger an investigation into the cause of the exceedance. If the exceedance persists in three successive monitoring periods, the Discharger shall submit a written report to the Regional Water Board on the nature of the exceedance, the results of the investigation as to the cause of the exceedance, and the corrective actions taken or proposed corrective measures with timetable for implementation, if necessary.

## VI. RATIONALE FOR RECEIVING WATER LIMITATIONS.

### A. Surface Water

The Basin Plan and the Ocean Plan contain numeric and narrative water quality objectives applicable to all surface waters within the Los Angeles Region. Water quality objectives include an objective to maintain the high-quality waters pursuant to federal regulations (40 CFR 131.12) and State Water Board Resolution No. 68-16. Receiving water limitations in the tentative Order are included to ensure protection of beneficial uses of the receiving water.

### B. Groundwater – Not Applicable.

## VII. RATIONALE FOR PROVISIONS.

### A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR section 122.42, are provided in Attachment D to the Order.

Sections 122.41(a)(1) and (b) through (n) of 40 CFR establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR sections 122.41(j)(5) and (k)(2) because the enforcement authority under the CWC is more stringent. In lieu of these conditions, this Order incorporates by reference CWC section 13387(e).

### B. Special Provisions

#### 1. Reopener Provisions

These provisions are based on 40 CFR § 123.25. The Regional Water Board may reopen the Order to modify conditions and requirements. Causes for modifications can include, but are not limited to, the promulgation of new regulations, modification in

biosolids use or disposal practices, or adoption of new regulations by the State Water Board or Regional Water Board, including revisions to the Ocean Plan and Basin Plan.

2. **Special Studies and Additional Monitoring Requirements**

   a. **Antidegradation Analysis and Engineering Report for Proposed Plant Expansion:** This provision is based on the State Water Board Resolution No. 68-16, which requires the Regional Water Board in regulating the discharge of waste to maintain high quality waters of the state. The Discharger must demonstrate that it has implemented adequate controls (e.g., adequate treatment capacity) to ensure that high quality waters will be maintained. This provision requires the Discharger to clarify that it has increased plant capacity through the addition of new treatment system(s) to obtain alternative effluent limitations for the discharge from the treatment system(s). This provision requires the Discharger to report specific time schedules for the plant's projects. This provision requires the Discharger to submit a report to the Regional Water Board for approval.

   b. **Operations Plan for Proposed Expansion**. This provision is based on section 13385(j)(1)(D) of the CWC and allows a time period not to exceed 90 days in which the Discharger may adjust and test the treatment system(s). This provision requires the Discharger to submit an Operations Plan describing the actions the Discharger will take during the period of adjusting and testing to prevent violations.

   c. **Treatment Plant Capacity.** The treatment plant capacity study required by this Order shall serve as an indicator for the Regional Water Board regarding the Facility's increasing hydraulic capacity and growth in the service area.

   d. **Toxicity Reduction Evaluation (TRE) Requirements.** If the discharge consistently exceeds an effluent limitation for toxicity as specified in this Order, the Discharger shall conduct a TRE as detailed in section V of the MRP (Attachment E). The TRE will help the Discharger identify the possible source(s) of toxicity. The Discharger shall take all reasonable steps to reduce toxicity to the required level.

3. **Best Management Practices and Pollution Prevention**

   a. **Spill Clean-Up Contingency Plan (SCCP)**: Since spills or overflows are a common event at the POTW, this Order requires the Discharger to review and update, if necessary, its SCCP after each incident. The Discharger shall ensure that the up-to-date SCCP is readily available to the sewage system personnel at all times and that the sewage personnel are familiar with it.

   b. **Pollutant Minimization Program (PMP):** This provision is based on the requirements of section III.C.9 of the Ocean Plan.

4. **Construction, Operation, and Maintenance Specifications**

   This provision is based on the requirements of 40 CFR §122.41(e) and the previous Order.

5. **Special Provisions for Publicly-Owned Treatment Works (POTWs)**

   a. **Sludge (Biosolids) Requirements**. To implement CWA section 405(d), on February 19, 1993, USEPA promulgated 40 CFR § 503 to regulate the use and disposal of municipal sewage sludge. This regulation was amended on September 3, 1999. The regulation requires that producers of sewage sludge meet certain reporting, handling, and disposal requirements. It is the responsibility of the Discharger to comply with said regulations that are enforceable by USEPA, because California has not been delegated the authority to implement this program.

b. **Pretreatment Program Requirements**. This permit contains pretreatment requirements consistent with applicable effluent limitations, national standards of performance, and toxic and performance effluent standards established pursuant to sections 208(b), 301, 302, 303(d), 304, 306, 307, 403, 404, 405, and 501 of the CWA, and amendments thereto. This permit contains requirements for the implementation of an effective pretreatment program pursuant to section 307 of the CWA; 40 CFR § 35 and 403; and/or section 2233, Title 23, California Code of Regulations.

c. **Spill Reporting Requirements for POTWs**. This Order established a reporting protocol for how different types of spills, overflows, and bypasses of raw or partially treated sewage from the POTW shall be reported to regulatory agencies.

d. **Collection System**. The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order 2006-0003-DWQ (General Order) on May 2, 2006. The State Water Board amended the Monitoring and Reporting Program for the General Order through Order WQ 2013-0058-EXEC on August 6, 2013. The General Order requires public agencies that own or operate sanitary sewer systems with sewer lines one mile of pipe or greater to enroll for coverage and comply with the General Order. The General Order requires agencies to develop sanitary sewer management plans and report all sanitary sewer overflows, among other requirements and prohibitions

6. **Compliance Schedules – Not applicable**

## VIII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS.

Section 308(a) of the federal Clean Water Act and sections 122.41(h), (j)-(l), 122.44(i), and 122.48 of Title 40 of the Code of Federal Regulations (40 CFR) require that all NPDES permits specify monitoring and reporting requirements. CWC sections 13267 and 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The MRP establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements in the MRP for this facility.

### A. Influent Monitoring

Influent monitoring is required to determine compliance with NPDES permit conditions, assess treatment plant performance,and assess effectiveness of the Pretreatment Program. Influent monitoring in this Order follows the influent monitoring requirements in the previous Order.

### B. Effluent Monitoring

The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit limitations and conditions. Monitoring requirements are specified in the MRP (Attachment E). This Order requires compliance with the MRP, and is based on 40 CFR § 122.48, 122.44(i), 122.41(j), 122.62, 122.63, and 124.5. The MRP is a standard requirement in NPDES permits (including this Order) issued by the Regional Water Board. In addition to containing definition of terms, it specifies general sampling/analytical protocols and the requirements of reporting spills, violation, and routine monitoring data in accordance with NPDES regulations, the CWC, and Regional Water Board policies. The MRP also contains sampling program specific for the Discharger's wastewater treatment plant. It defines the sampling stations and frequency, pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all pollutants for which effluent limitations are specified.

Monitoring for those pollutants expected to be present in the discharge from the facility, will be required as shown on the proposed MRP (Attachment E) and as required in the Ocean Plan.

Monitoring frequency for the constituents is based on historic monitoring frequency, Best Professional Judgment, and the following criteria:

Criterion 1: Monitoring frequency will be monthly for those pollutants with reasonable potential to exceed water quality objectives (monitoring has shown an exceedance of the objectives) or where Best Professional Judgement indicates additional monitoring is necessary due to existing or anticipated changes in the treatment process or environment;

Criterion 2: Monitoring frequency will be quarterly for those pollutants in which some or all of the historic effluent monitoring data detected the pollutants, but without reasonable potential to exceed water quality objectives; and

Criterion 3: Monitoring frequency will be semiannually for those pollutants in which all of the historic effluent monitoring data have had non-detected concentrations of the pollutants and without current reasonable potential to exceed water quality objectives.

**Table F-16. Effluent Monitoring Frequency Comparison**

| Parameter | Monitoring Frequency (2013 Permit) | Monitoring Frequency (2018 Permit) |
|---|---|---|
| Flow | Continuous | Continuous |
| $BOD_5 20^oC$ | daily | weekly |
| Total Suspended Solids | daily | weekly |
| pH | daily | weekly |
| Oil and Grease | daily | weekly |
| Temperature | weekly | weekly |
| Settleable Solids | daily | weekly |
| Turbidity | continuous | continuous |
| Nitrate Nitrogen | monthly | monthly |
| Nitrite Nitrogen | monthly | monthly |
| Organic Nitrogen | monthly | monthly |
| Total coliform | daily | daily |
| Fecal Coliform | 5 times/month | 5 times/month |
| *Enterococcus* | 5 times/month | 5 times/month |
| Arsenic | semiannually | semiannually |
| Cadmium | semiannually | semiannually |
| Chromium VI | semiannually | semiannually |
| Copper | semiannually | semiannually |
| Lead | semiannually | semiannually |
| Mercury | semiannually | semiannually |
| Nickel | semiannually | semiannually |
| Selenium | semiannually | semiannually |
| Silver | semiannually | semiannually |